

**Amendments in the Claims:**

Please cancel claims 19, 25, 26 and 35 without prejudice or disclaimer.

This listing of claims will replace all prior versions and prior claim listings in the above-identified application:

1. (currently amended) A method for imaging tumor vasculature in a mammal comprising
  - a) administering to the mammal a composition, comprising which comprises a molecule which specifically binds capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an imaging agent, wherein the Ang-2-binding molecule targets the tumor vasculature;
  - b) allowing the composition to accumulate at the tumor vasculature; and
  - c) detecting the accumulated composition so as to image the tumor vasculature.

2-3. (cancel)

4. (original) The method of claim 1 wherein the accumulated composition is detected by a detector selected from the group consisting of a conventional scintillation camera, a gamma camera, a rectilinear scanner, a PET scanner, a SPECT scanner, a MRI scanner, a NMR scanner, and an X-ray machine.

5. (original) The method of claim 1 wherein the imaging agent is a radionuclide or a chelate.

6. (currently amended) A method of causing tumor cell death by targeting tumor vasculature comprising administering to a mammal a composition, comprising which comprises a molecule which specifically binds capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an agent capable of causing tumor cell death.

7. (currently amended) A method of causing vascular endothelial cell death by targeting tumor vasculature comprising administering to a mammal a composition, comprising which comprises a molecule which specifically binds capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an agent capable of causing vascular endothelial cell death.

8-9. (cancel)

10. (original) The method of claim 6 wherein the agent capable of causing tumor cell death is

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  - a) administering to the mammal a composition, comprising which comprises a molecule which specifically binds capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an imaging agent, wherein the Ang-2-binding molecule targets the tumor vasculature;
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4. (original) The method of claim 1 wherein the accumulated composition is detected by a detector selected from the group consisting of a conventional scintillation camera, a gamma camera, a rectilinear scanner, a PET scanner, a SPECT scanner, a MRI scanner, a NMR scanner, and an X-ray machine.

5. (original) The method of claim 1 wherein the imaging agent is a radionuclide or a chelate.

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7. (currently amended) A method of causing vascular endothelial cell death by targeting tumor vasculature comprising administering to a mammal a composition, comprising which comprises a molecule which specifically binds capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an agent capable of causing vascular endothelial cell death.

8-9. (cancel)

10. (original) The method of claim 6 wherein the agent capable of causing tumor cell death is

selected from the group consisting of carboplatin, cisplatin, vincristine, methotrexate, paclitaxel, docetaxel, 5-fluorouracil, UFT, hydroxyurea, gemcitabine, vinorelbine, irinotecan, tirapazamine, and matrilysin.

11-12. (cancel)

13. (original) The method of claim 7 wherein the agent capable of causing vascular endothelial cell death is selected from the group consisting of gelonin, ricin A, ricin B, saporin, bryodin 1, bryodin 2, momordin, pokeweed antiviral protein from seeds (PAP-S), trichokirin, and abrin.

14. (original) The method of claim 1, 6, or 7 wherein the mammal is a human.

15. (previously amended) The method of claim 1, 6, or 7 wherein the Ang-2-binding molecule capable of detecting Ang-2 polypeptide is selected from the group consisting of a monoclonal antibody, an antibody fragment, a single chain fv a Tie 1-Fc receptorbody polypeptide, a Tie 2-Fc receptorbody polypeptide, a Tie 1 receptor fragment polypeptide containing an Ang-2 binding domain, and a Tie 2 receptor fragment polypeptide containing an Ang-2 binding domain.

16. (cancel)

17. (original) The method of claim 1, 6, or 7 wherein the composition is administered to a mammal with a carrier suitable for parenteral administration.

18. (original) The method of claim 17 wherein the mammal is a human.

19-21. (cancel)

22. (currently amended) A kit for imaging tumor vasculature in a mammal comprising a composition, comprising which comprises an a molecule which specifically binds capable of detecting angiopoietin-2 (Ang-2) nucleic acid or polypeptide coupled to an imaging agent.

23-30. (cancel)

31. (currently amended) The kit of claim 22, 25, or 26 wherein the Ang-2-binding molecule capable of detecting Ang-2 polypeptide is selected from the group consisting of a monoclonal antibody, an

antibody fragment, a single chain fv, a Tie 1-Fc receptorbody polypeptide, a Tie 2-Fc receptorbody polypeptide, a Tie 1 receptor fragment polypeptide containing an Ang-2 binding domain, and a Tie 2 receptor fragment polypeptide containing an Ang-2 binding domain.

32. (cancel)

33. (currently amended) The kit of claim 22, 25, or 26 wherein the composition is administered to a mammal with a carrier suitable for parenteral administration.

34. (original) The kit of claim 33 wherein the mammal is a human.

35-37. (cancel)